SDT 170

"The Little blue wonder"

Product Ref. Code: FS170S / FS170M / FS170MD

General Description:

The SDT 170 encompasses our company's vast experience in the fields of ultrasonic leak detection, tightness testing and predictive maintenance. It is robust, lightweight, user friendly and ergonomically designed. It provides a totally efficient, and simple response to proper and effective equipment maintenance and product quality.

The SDT 170 is multifunctional. As user-friendly as a desktop PC. It is a single hardware configuration that transforms to your changing needs. It is capable of measuring several physical parameters (ultrasound, audible noise, temperature, rotation and linear speed, flow, and more). All versions are built around our world famous ultrasonic detection capabilities and feature an internal airborne ultrasonic sensor. Upgraded versions can collect, store, and transfer data to and from a PC.

The SDT 170 saves money. Regular use of the SDT 170 enables the efficient planning of machine downtime witch leads to better productivity. The ability to pinpoint leaks in systems can also lead to significant savings of up to 30% in energy costs.

The SDT 170 is ergonomically designed and user-friendly. The SDT 170 is a comfortably designed hand-held instrument controlled by an eight key touch pad. A generous Liquid Crystal Display, 3cm x 6cm is protected by a Borosilicate glass screen and displays all parameters needed for its use in 8 or more different languages. The technical training requires about ten minutes. An extruded aluminium outer shell is protected by "anti-shock" insulation and the NMHD rechargeable battery block uses latest battery technology allowing more than eight hours of use and unrestricted charging practices.

The SDT 170 is intelligent. The SDT 170 automatically recognises the sensors upon connection and switches to appropriate parameters and measuring mode accordingly. Some versions are equipped to accept user-defined parameters such as the measurement and collection of data at set intervals. The use of flash EEPROM technology allows us to transmit by Internet updates, and improvements to our dealers and users worldwide.

The SDT 170 is digital and versatile. The advanced, state of the art, digital SMT electronics permits the use of other original accessories. The SDT 170 processes data digitally, displays it digitally, and outputs it in standard digital protocol formats. As our customers develop new applications, we meet their requests by developing sensors to suit those needs. Whether the result of a request or as a perceived need for industry, over time the SDT 170 will expand its functionality and versatility indefinitely.

SDT 170S

Product Ref. Code: FS170S

General Description:

The SDT 170S (**S**tandard) is the entry-level point for the SDT 170 platform and features standard airborne ultrasonic detection with an internal sensor. It is primarily used for compressed air leak and vacuum leak detection, verifying the tightness of seals in a car, plane, truck, train, clean rooms, vessels, ship hatch covers, etc…). It is a low cost solution for the detection of electrical problems (arcing, corona, tracking), inspection of steam traps, hydraulic and pneumatic circuits, pump cavitations, and general mechanical inspections where trending and measured data is not critical.

All measured signals are displayed on a segmented analogue bar graph. The SDT 170S version can be used in combination with all external ultrasonic sensors (contact probe, magnetic sensor, threaded sensor, flexible sensor, parabolic waveform concentrator, waterproof airborne sensors, extended distance sensor, and lubrication adaptor).

The SDT 170S can be fully up-graded to the SDT 170M (Multifunctional) and SDT 170MD (Multifunctional/DataManager) versions.

The unit contains:

FUSUIT170	Systainer plastic case SDT 170 + foam
FU170S	SDT 170S unit with battery, blue rubber protection and user manual
FSPRECIND	Precision indicator (threaded tip, rubber tip, 2 plastic tubes)
FUHEADPH1	Headphone SDT 130 dB blue neck band type
FUPS170EU	Battery loader SDT 170
FUSTRAP	Shoulder strap for SDT 170
FUCABRS232/170	Cable RS 232 Stewart - SubD9 female L 1,5m

Technical Data:

Function:	Multifunction detector
Display:	Extended temperature Graphic High contrast LCD with backlighting 100x32pixels
Keyboard:	8 function key's
Ultrasonic sensors:	- Internal : bandwith (-6dB) +/-2KHz, frequency 40 +/- 1KHz, sensitivity (40KHz) –65dB/V/µbar, total beam angle (-6dB) 55° typical - External
Measuring range:	-10 to 120dBµV
Accuracy:	± 0.5dBµV
Measuring resolution:	0.1dBµV
Noise level:	–5dBµV typical
Band width:	(-3dB) 2kHz
Frequency range:	0 to 200kHz depending on the sensor
Battery pack:	- Rechargeable NiMH (Nickel Metal Hydrate). - Autonomy of 8 to 10 hours without backlighting. - Recharge time: 5 to 6 hours. - Nominal Capacity: 1,5Ah. - Life span: 500 to 1000 charge/discharge cycles. - Recharge only with appropriate charger.
Auto power down:	Auto power down after pre set time
Operating temperature:	-15 to +60°C (5 to 140°F)
Housing:	Extruded aluminum
Weight:	750g (26.45oz.) (with battery and holster included)
Dimensions:	225x90x40mm (8,86x3.54 x1.57") (L x W x H)
Holster:	Rubber resistant to hydrocarbons (Fluor silicone)

SDT 170M

Product Ref. Code: FS170M

General Description:

The SDT 170M (**M**ultifunctional – **M**emory – **M**echanical applications) is the multi-functional upgrade from the entry level SDT 170S Standard. It is a robust instrument capable of detecting small or large pressure and vacuum leaks in high noise environments and trending the condition of rotating machinery components such as bearings, gears, couplings, motors, reducers as well as pumps, valves, steam traps, turbines and detecting of corona discharges etc … It features:

Digital measurement and readout capabilities
Contact Probe for contact acoustic vibration measurements
1000 memory points storage for recording measured data (up to 4000 measurements can be saved in a rolling FIFO memory)
Compatibility with Multi-functional sensor inputs (temperature, speed, mass flow, sound)
Ultrasonic sensor inputs (**flexible sensor, magnetic probe, parabolic waveform sensor, threaded sensor, extended distance sensor, lubrication adaptor**).

The SDT 170M displays measured data in a large digital format. All measured data can be stored and recalled on the 1000-point memory. The SDT 170M version can easily be up-graded to the SDT 170MD version.

The unit contains:

FUSUIT170	Systainer plastic case SDT 170 + foam
FU170M	SDT 170 M unit with battery, blue rubber protection and user manual
FSPRECIND	Precision indication (threaded tip, rubber tip, 2 plastic tubes)
FUHEADPH1	Headphone SDT 130 dB blue neck band type
FUPS170EU	Battery loader SDT 170
FUSTRAP	Shoulder strap for SDT 170
FSSON170	Contact probe SDT 170 + needle
FUTOPUNCH	Center punch
FUCABRS232/170	Cable RS 232 Stewart - SubD9 female L 1,5m

Technical Data:

Function:	Multifunction detector
Display:	Extended temperature Graphic High contrast LCD with backlighting 100 x 32 pixels
Keyboard:	8 function key's
Ultrasonic sensors:	- Internal : bandwith (-6dB) +/-2KHz, frequency 40 +/- 1KHz, sensitivity (40KHz) –65dB/V/µbar, total beam angle (-6dB) 55° typical - External
Measuring range:	-10 to 120dBµV
Accuracy:	± 0.5dBµV
Measuring resolution:	0.1dBµV
Noise level:	–5dBµV typical
Band width:	(-3dB) 2 kHz
Frequency range:	0 to 200 kHz depending on the sensor
Battery pack:	- Rechargeable NiMH (Nickel Metal Hydrate). - Autonomy of 8 to 10 hours without backlighting. - Recharge time: 5 to 6 hours. - Nominal Capacity: 1,5Ah. - Life span: 500 to 1000 charge/discharge cycles. - Recharge only with appropriate charger.
Auto power down:	Auto power down after pre set time
Operating temperature:	-15 to +60°C (5 to 140°F)
Housing:	Extruded aluminum
Weight:	750g (26.45oz.) (with battery and holster included)
Dimensions:	225x90x40mm (8,86x3.54x1.57") (L x W x H)
Holster:	Rubber resistant to hydrocarbons (Fluor silicone)

SDT 170MD

Product Ref. Code: FS170MD

General Description:

The SDT 170MD (**M**ultifunctional/**D**ataManager) is the complete ultrasonic inspection and predictive maintenance trending machine. With all the features of the SDT 170M Multifunctional, we've added a up to 128 routes of up to 1000 points customisable data logger that interfaces directly with you PC via DataManager software.

DataManager software is the bridge between your SDT 170MD Ultrasonic Detector and your PC. Any and all data measured by the SDT 170MD can be stored temporarily in the onboard data logger. DataManager allows this information to be downloaded via RS232 communications to a PC. Once inside the PC, DataManager organises the measurements into a logical and easily retrievable filing system, which is built and customized by the individual user.

Customized routes can be created within the DataManager software and transferred to the SDT 170MD (up to 128 routes of max 1000 points at a time). Warning (orange) and alarm (red) levels are set for individual assets and data can be presented in list or graphical form and printed on spreadsheet program. All results can be exported to a MIMOSA, ASCII or DBF format.
It is possible to store up to 4 000 measurements per route. For each memory location the last four measurements are stored in a rolling memory (FIFO) and are retrievable at any time.

The main functions of the DataManager software are:

- ✓ **Create and customize routes**
- ✓ **Transfer routes from PC to SDT 170MD**
- ✓ **Transfer measured data from SDT 170MD to PC**
- ✓ **Organize data into graphical or report formats**
- ✓ **Alert when an alarm is exceeded**
- ✓ **Trend data and provide historical info on the health of plant machinery**

The unit contains:

FUSUIT170	Systainer plastic case SDT 170 + foam
FU170MD	SDT 170MD unit with battery, blue rubber protection and user manual
FSPRECIND	Precision indicator (threaded tip, rubber tip, 2 plast. tubes)
FUHEADPH1	Headphone SDT 130 dB blue neck band type
FUPS170EU	Battery loader SDT 170
FUSTRAP	Shoulder strap for SDT 170
FSSON170	Contact probe SDT 170 + needle
FUTOPUNCH	Center punch
FUSOFTDATAMAN1	CD-ROM DataManager Software with user manual
FUCABRS232/170	Cable RS 232 Stewart - SubD9 female L 1,5m

Technical Data:

Function:	Multifunction detector
Display:	Extended temperature Graphic High contrast LCD with backlighting 100x32pixels
Keyboard:	8 function key's
Ultrasonic sensors:	- Internal : bandwith (-6dB) +/-2KHz, frequency 40 +/- 1KHz, sensitivity (40KHz) –65dB/V/µbar, total beam angle (-6dB) 55° typical - External
Measuring range:	-10 to 120dBµV
Accuracy:	± 0.5dBµV
Measuring resolution:	0.1dBµV
Noise level:	–5dBµV typical
Band width:	(-3dB) 2 kHz
Frequency range:	0 to 200kHz depending on the sensor
Battery pack:	- Rechargeable NiMH (Nickel Metal Hydrate). - Autonomy of 8 to 10 hours without backlighting. - Recharge time: 5 to 6 hours. - Nominal Capacity: 1,5Ah. - Life span: 500 to 1000 charge/discharge cycles. - Recharge only with appropriate charger.
Auto power down:	Auto power down after pre set time
Operating temperature:	-15 to +60°C (5 to 140°F)
Housing:	Extruded aluminum
Weight:	750g (26.45oz.) (with battery and holster included)
Dimensions:	225x90x40mm (8,86x3.54x1.57") (L x W x H)
Holster:	Rubber resistant to hydrocarbons (Fluor silicone)

Warranty:

2 years limited warranty on material and labour for the receiver SDT 170, with exception of the battery and accessories (6 months).
Warranty voids if items have been wrongly used, opened or disassembled.

Revision History:

DATE	Version	Revision
02 August 2000	1.0	Draft for internet and PDF file
19 September 2000	1.1	English draft
30 January 2001	1.2	English version
28 February 2001	1.3	English version corrected by Allan Rienstra
31 October 2001	1.4	New picture
28 February 2002	1.5	Product ref. code correction
17 APRIL 2003	1.6	New picture and description
03 May 2003	1.7	New technical data for site and catalogue

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The information herein is believed to be accurate to the best of our knowledge.
Due to continued research and development specifications of this product can change without prior notice.

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